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# PATENT SPECIFICATION

614,272

Application Date: July 9, 1946.

No. 20455/46.

Complete Specification Left: July 3, 1947.

Complete Specification Accepted: Dec. 13, 1948.

Index at acceptance:—Class 52(iv), Mlc(3a: 5a: x).

## PROVISIONAL SPECIFICATION

### Improvements in or relating to Spring Units for Beds

I, HAROLD FREDERICK GODFREY, of 21, Seaside Road, Eastbourne, in the County of Sussex, England, of British Nationality, do hereby declare the nature of this invention to be as follows:—

The present invention relates to improvements in spring units for beds.

According to the invention a spring unit for a bed comprising a number of spring metal laths laid flat, arranged side by side and tensioned between end supporting members is characterised in that each lath is provided at spaced intervals in its length with downwardly directed curved folds or loops, each lath being resiliently supported intermediate the folds or loops.

The folds or loops in the length of each lath allow the lath to stretch overall in the event of a weight being applied intermediate its ends and to deflect to the greatest degree at the point where the weight is applied.

According to a further feature of the invention the spring unit comprises a rigid base upon which the intermediate resilient supports are mounted.

In carrying the invention into effect the lath is made of flat metal leaf preferably about three inches in width and the folds or loops may be formed with a number of configurations which will be more readily understood by reference to the accompanying drawings which illustrate by way of example preferred embodiments of the invention.

In the drawings Figures 1 to 4 illustrate preferred examples of spring configuration and resilient supports.

Referring to Figure 1 the lath 1 is tensioned between end supports 2 and is provided with folds 3. Also fixed to the end supports 2 is a rigid base formed by a rod 4 upon which is mounted a supplementary spring support 5. The support 5

is made preferably of a continuous length of spring metal snaked alternatively between the rod 4 and the lath 1 as shown, the lath being supported intermediate each pair of folds.

The supporting strip 5 as more clearly shown in Figure 2 is bulged or provided with longitudinally disposed corrugations as at 6. These corrugations restrict the deflection of the support 5 and engage with the rod 4 (see Figure 1) to position the support.

Figure 3 illustrates a lath having a modified fold 8 which extends down to the base rod 4 to derive additional support and the spring strip 5 stiffened by short leaf members 8.

Figure 4 illustrates a lath supported intermediate the folds 3 with spiral springs 5a.

Several of the above described arrangements may if desired be embodied in one lath as for example in Figure 3 folds of more than one shape may be provided and the resilient support may be varied at or between different folds. Also, as in Figure 4, the lath may be supported at more than one point between a pair of folds.

Slots may be introduced in the face of the lath to add to its resiliency and to reduce the weight.

Dated the 9th day of July, 1946.

For:

HAROLD FREDERICK GODFREY;  
Stevens, Langner, Parry & Rollinson,  
Chartered Patent Agents,  
5—9, Quality Court,  
Chancery Lane, London, W.C.2,  
and at  
120, East 41st Street,  
New York, U.S.A.

## COMPLETE SPECIFICATION

## Improvements in or relating to Spring Units for Furniture for Sitting or Lying Upon

I, HAROLD FREDERICK GODFREY, a British Subject, of 21, Seaside Road, Eastbourne Road, Sussex, England, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to improvements in spring units for furniture for sitting or lying upon.

According to the invention a spring unit for furniture for sitting or lying upon comprising a number of spring metal laths laid flat, arranged side by side, and tensioned between end supporting members is characterised in that each lath is provided at spaced intervals in its length with downwardly directed curved folds, and each lath is resiliently supported intermediate one or more pairs of the said folds.

The folds or loops in the length of each lath allow the lath to stretch overall in the event of a weight being applied intermediate its ends and to deflect to the greatest degree at the point where the weight is applied.

According to a further feature of the invention each lath is resiliently supported intermediate the said folds by means of one or more supplementary spring elements located between the lath and a rigid base member extending between the end supporting members.

In carrying the invention into effect the lath is made of flat metal leaf preferably about three inches in width and the folds may be formed with a number of configurations which will be more readily understood by reference to the drawings accompanying the provisional specification which illustrate by way of example preferred embodiments of the invention.

In the drawings, Figures 1 to 4 illustrate preferred examples of spring configurations and resilient supports.

Referring to Figure 1, the lath 1 is tensioned between end supports 2 and is provided with folds 3. Also fixed to the end supports 2 is a rigid base formed by a rod 4 upon which is mounted a supplementary spring element 5. The element 5 is made preferably of a length of spring metal snaked alternatively between the rod 4 and the lath 1 as shown, the lath being supported intermediate each pair of folds. The element 5 can, however, be replaced by a number of shorter strips

arranged intermittently and, instead of being fixedly secured to the lath 1 and rod 4 as shown in the drawings, it can be carried between the lath and rod so as to be slidable on the lath or rod or on both.

The spring element 5, as more clearly shown in Figure 2, is bulged or provided with longitudinally disposed corrugations as at 6. These corrugations restrict the deflection of the spring element 5 and engage with the rod 4 (see Figure 1) to position the said element. Whilst the element 5 is shown as of the same width as the lath greater resiliency can, if desired, be obtained by making it narrower, an element of half the width of the lath being satisfactory for some purposes.

Figure 3 illustrates a lath having a modified fold 3 which extends down to the base rod 4 to derive additional support and the spring element 5 stiffened by short leaf members 8.

Figure 4 illustrates a lath supported intermediate the folds 3 with spiral springs 5a.

Several of the above described arrangements may, if desired, be embodied in one lath, as for example in Figure 3 folds of more than one shape may be provided and the resilient support may be varied at or between different folds. Also, as in Figure 4, the lath may be supported at more than one point between a pair of folds.

Slots may be introduced in the face of the lath to add to its resiliency and to reduce the weight.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A spring unit for furniture for sitting or lying upon comprising a number of spring metal laths laid flat, arranged side by side and tensioned between end supporting members, wherein each lath is provided at spaced intervals in its length with downwardly directed curved folds, and each lath is resiliently supported intermediate one or more pairs of the said folds.

2. A spring unit according to Claim 1, wherein each lath is resiliently supported intermediate one or more pairs of the said folds by means of one or more supplementary spring elements located between the lath and a rigid base member extend-

ing between the end supporting members.

3. A spring unit according to Claim 2, wherein a rigid base member is provided beneath each lath and is formed as a rod  
5 connected at each end to one of the end supporting members.

4. A spring unit according to Claims 2 or 3 wherein each lath is supported by a number of spring elements each comprising  
10 a strip of spring metal bowed between the lath and the base member.

5. A spring unit according to Claims 2 or 3, wherein each lath is supported by one spring element comprising a strip of  
15 spring metal snaked alternatively between the lath and the base member.

6. A spring unit according to Claims 2 or 3 wherein each lath is supported by a number of supplementary spring  
20 elements each comprising a coiled compression spring mounted vertically between the lath and the base member.

7. A spring unit according to Claims 4 or 5, wherein the strip of spring metal  
25 is provided with a longitudinally disposed upward corrugation at the position or positions at which it engages the base member.

8. A spring unit according to Claims 4  
30 or 5, wherein the strip of spring metal is stiffened with short leaf spring members

at the position or positions at which it engages the base member.

9. A spring unit according to any of Claims 2 to 7, wherein at least some of the  
35 downwardly curved folds extend to the base member.

10. A spring unit according to any of the preceding claims, wherein slots are provided in the faces of some or all of the  
40 laths.

11. A spring unit for furniture for sitting or lying upon substantially as hereinbefore described with reference to Figures  
45 1, 2 and 3 of the accompanying drawings accompanying the provisional specification.

12. A spring unit for furniture for sitting or lying upon substantially as hereinbefore described with reference  
50 to Figure 4 of the drawings accompanying the provisional specification.

Dated this 1st day of July, 1947.

For:

HAROLD FREDERICK GODFREY;  
Stevens, Langner, Parry & Rollinson,  
Chartered Patent Agents,  
5—9, Quality Court,  
Chancery Lane, London, W.C.2,  
and at  
120, East 41st Street,  
New York, 17, N.Y., U.S.A.

[This Drawing is a reproduction of the Original on a reduced scale.]

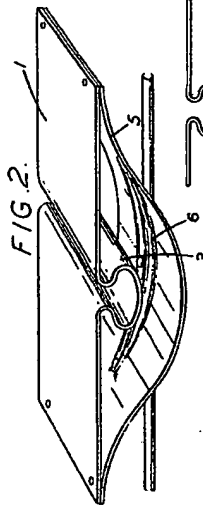
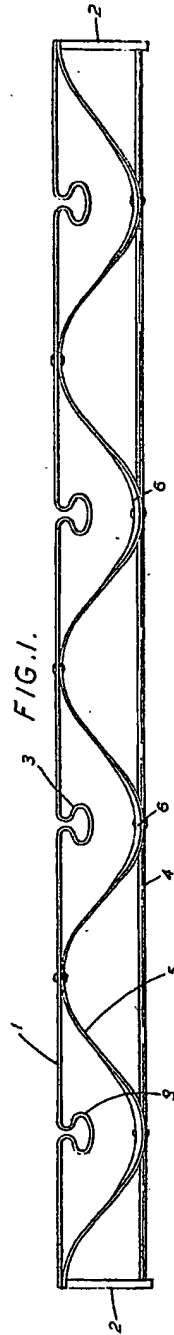


FIG. 3.

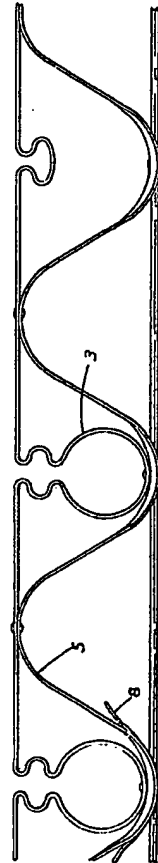


FIG. 4.

